UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

<u>Ex parte</u> MARC TREMBLAY and WILLIAM JOY

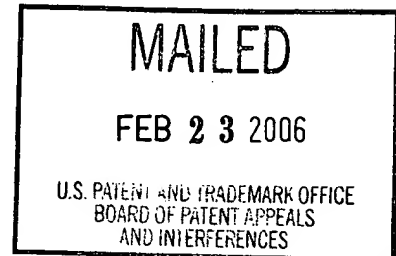Appeal No. 2005-2557
Application No. 09/204,585

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U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

ON BRIEF

Before KRASS, JERRY SMITH, and LEVY, <u>Administrative Patent Judges</u>.

JERRY SMITH, <u>Administrative Patent Judge</u>.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's

rejection of claims 1-28, which constitute all the claims pending in this application.

The disclosed invention pertains to the field of processors storing information in

register files, and more particularly to processors employing register files divided into

multiple register file segments each coupled to and associated with a respective

functional unit, wherein each register file segment is partitioned (or partitionable) into

local and global registers.

Representative claim 1 is reproduced as follows:

1.   A processor comprising:

a plurality of functional units; and

a register file that is divided into a plurality of register file segments, each coupled to and associated with respective ones of the plurality of functional units, the register file segments each implemented as an addressable array and partitionable into global registers and local registers, the global registers being accessible by the plurality of functional units, the local registers being accessible by the functional unit associated with the register file segment containing the local registers, wherein the number of global registers and the number of local registers are programmably configurable.

The examiner relies on the following references:

Yung	5,592,679	Jan. 07, 1997
Luan et al. (Luan)	5,911,149	Jun. 08, 1999 (filed Nov. 01, 1996)
Nishimoto et al. (Nishimoto)	6,023,757	Feb. 08, 2000 (filed Jan. 30, 1997)

Claims 1-28 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Yung in view of Luan with respect to claims 1, 3-14 and 23-28, and Nishimoto is added to this combination with respect to claims 2 and 15-22[1].

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof

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[1] The rejections of the claims based on Luan taken alone and Luan in view of Nishimoto have been withdrawn by the examiner [answer, page 6].

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in the claims on appeal. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert.

denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776

F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017

(1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ

929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of

complying with the burden of presenting a prima facie case of obviousness. Note In re

Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden

is met, the burden then shifts to the applicant to overcome the prima facie case with

argument and/or evidence. Obviousness is then determined on the basis of the

evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re

Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745

F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d

1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made

by appellants have been considered in this decision. Arguments which appellants could

have made but chose not to make in the brief have not been considered and are

deemed to be waived [see 37 CFR § 41.37(c)(1)(vii)(2004)].

We consider first the examiner's rejection of the claims based on Yung and

Luan. The examiner finds that Yung teaches the invention of independent claim 1

except that Yung does not teach that the number of global registers and the number of

local registers within a segment are programmably configurable as claimed. The

examiner cites Luan as teaching that the programmable configuration of memory was

well known in the art. The examiner finds that it would have been obvious to the artisan

to incorporate a programmably configurable memory as taught by Luan into the device

of Yung [answer, pages 6-7]. With respect to dependent claims 8, 21 and 28, the

examiner finds that Yung teaches the claimed invention except that the global register

file of Yung is shown as a single piece whereas the claimed global register file is

divided into M pieces. The examiner finds that it would have been an obvious design

choice to use a single piece or M pieces for the global register file [answer, pages 8-10].

With respect to claims 1, 3-7, 9-14 and 23-27, which are argued together as a

single group, appellants argue that neither Yung nor Luan discloses or suggests

register file segments each coupled to, and associated with, a respective functional unit

and each implemented as an addressable array and partitionable into global and local

registers. Specifically, appellants argue that the global register file of Yung and a

separate local buffer do not together constitute a register file segment as claimed, nor

would such a segment be programmably configurable as claimed. Appellants also

argue that Luan's programmable shared memory is not the same or interchangeable

with a register file segment that is implemented as an addressable array and that is

partitionable. Appellants assert that no interpretation of Luan supports an association

between any group of Luan's memory banks and any particular functional unit of Yung's

processor [brief, pages 8-11].

The examiner responds that the "thrust of the instant invention" is the same as the

teaching of Yung and that Luan teaches programmable partitioning [answer, pages 11-

13]. Appellants respond that similarity in "thrust" of the claimed invention and the prior

art plays no role in the proper legal analysis of obviousness. Appellants also respond that the examiner's analysis is incorrect and that the memory banks of Luan cannot correspond to the structures recited in the claimed invention [reply brief, pages 7-8].

We will not sustain the examiner's rejection of claims 1-7, 9-14 and 23-27 for essentially the reasons argued by appellants in the briefs. We agree with appellants that there is no motivation to apply the general programmable memory configurations of Luan to the local and global buffers of Yung. There is no suggestion that programmable memory partitioning, as generally taught by Luan, can be applied to register file segments related to global and local registers in a device as taught by Yung. We also agree with appellants that the examiner cannot rely on the fact that the applied prior art may be the same as or similar to the "thrust" of the claimed invention. Since separately argued claims 8 and 28 depend from claims 7 and 27, respectively, we also do not sustain the examiner's rejection of these claims.

We now consider the examiner's rejection of the claims based on Yung, Luan and Nishimoto. These claims all have recitations similar to the claims considered above. Since Nishimoto does not overcome the deficiencies of Yung and Luan discussed above, we also do not sustain the examiner's rejection of claims 2 and 15-22 for the reasons discussed above.

In summary, we have not sustained the examiner's rejections with respect to any of the claims on appeal.   Therefore, the decision of the examiner rejecting claims 1-28 is reversed.

<u>REVERSED</u>

ERROL A. KRASS   )
Administrative Patent Judge   )
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) BOARD OF PATENT
JERRY SMITH   )   APPEALS
Administrative Patent Judge   )   AND
) INTERFERENCES
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STUART S. LEVY   )
Administrative Patent Judge   )

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